# Section 5. Terms of Reference

Contents

[**1. PRELIMINARY INFORMATION** 1](#_Toc46477561)

[**2.** **SCOPE OF WORK** 4](#_Toc46477562)

[**3.** **TECHNICAL REQUIREMENTS** 5](#_Toc46477563)

[**3.1.** **PRE-ENGINEREED STEEL FRAMED BUILDINGS** 5](#_Toc46477564)

[**3.1.1.** **Materials Specifications** 5](#_Toc46477565)

[**3.1.2.** **Dimensions** 5](#_Toc46477566)

[**3.2.3. Modularity** 6](#_Toc46477567)

[**3.1.4 Welding and corrosion protection** 6](#_Toc46477568)

[**3.1.5. Characteristics** 6](#_Toc46477569)

[**4.** **WORKS REQUIREMENTS** 9](#_Toc46477570)

[**4.1.** **Codes and standards** 9](#_Toc46477571)

[**4.2.** **Phase 1 - Design** 9](#_Toc46477572)

[**4.2.1.** **Preliminary Design** 9](#_Toc46477573)

[**4.3.** **Phase 2 – Manufacture** 10](#_Toc46477574)

[**4.3.1.** **Construction Set of Documents** 10](#_Toc46477575)

[**4.4.** **Phase 3 - Supply** 12](#_Toc46477576)

[**4.4.1.** **Requirements for delivery, freight and insurance** 13](#_Toc46477577)

[**4.5.** **Timing and deadlines** 13](#_Toc46477578)

[**4.6.** **Delay damages** 14](#_Toc46477579)

[**4.7**. **Phase 4 – Supervision during erection and launching** 14](#_Toc46477580)

[**4.7.1.** **Assembly requirements** 14](#_Toc46477581)

[**4.7.2.** **Assembly Time** 15](#_Toc46477582)

[**4.7.3.** **Progress Reports** 15](#_Toc46477583)

[**4.7.4.** **Site Progress Meetings** 16](#_Toc46477584)

[**4.7.5.** **Design Errors** 16](#_Toc46477585)

[**4.7.6.** **Environmental Impact** 16](#_Toc46477586)

[**4.7.7.** **Tests during erection and completion** 16](#_Toc46477587)

[**4.7.8.** **Retesting of the works** 17](#_Toc46477588)

[**4.7.9.** **Failure to pass tests on completion** 17](#_Toc46477589)

[**4.7.10.** **Commissioning Certificate** 18](#_Toc46477590)

[**4.8.** **After-Sales Technical Support** 18](#_Toc46477591)

[**4.9.** **Warranty:** 18](#_Toc46477592)

# **1.** **PRELIMINARY INFORMATION**

* 1. **DEFINISTIONS**

 For the purpose of the Contract Documents the words and expressions below shall have the following meanings:

1. "Employer" means the United Nations Development Programme (UNDP).
2. "Contractor" means the person whose tender has been accepted and with whom the Contract has been entered into.
3. "Engineer" means the person whose services have been engaged by UNDP to administer the Contract as provided therein, as will be notified in writing to the Contractor.
4. "Contract" means the written agreement between the Employer and the Contractor, to which these General Conditions are annexed.
5. "The Works" means the works to be executed and completed under the Contract.
6. "Temporary Works" shall include items to be constructed which are not intended to be permanent and form part of the Works.
7. "Drawings" and "Specifications" mean the Drawings and Specifications referred to in the Contract and any modification thereof or addition thereto furnished by the Engineer or submitted by the Contractor and approved in writing by the Engineer in accordance with the Contract.
8. "Bill of Quantities" is the document in which the Contractor indicates the cost of the Works, on the basis of the foreseen quantities of items of work and the fixed unit prices applicable to them.
9. "Contract Price" means the sum agreed in the Contract as payable to the Contractor for the execution and completion of the Works and for remedying of any defects therein in accordance with the Contract.
10. "Site" means the land and other places on, under, in or through which the Works or Temporary Works are to be constructed.
11. ‘Product(s)’ in a commercial way, it shall consist of any of the goods in object of this tender, designed and fabricated by the Supplier and included in the Agreement, and which the Employer may order at any time during the validity of the Agreement.
12. ‘Services’ shall consist of any engineering services or supervision services that can be provided by the Supplier in association with the design, fabrication, assessment, erection and supervision during erection of any of the Product(s), and included in the Agreement.
13. ‘Structure(s)’ shall consist of all structural and non-structural material forming part of the Products, such as: columns, rafters, beams, bracing, connections clips, roof purling, wall girts, roof and wall sheeting (cladding), anchor bolts, flashing trims, doors, gates, etc. and any other component or element described herein or required in order to meet the requirement of a completed warehouse for the storage of medicine stuffs and equipment.
14. ‘Building clear height’ is the distance from the finished floor level to the bottom of the end plate of the rafter at the knee.
15. ‘Clear floor area’ refers to the area within the warehouse where the building clear height is achieved.
16. ‘Stage’ refers to a specific section of the project, with specific scope of works and specific deliverables, which shall be delivered by the Contractor within a stated milestone.
	1. **THE PROJECT**

UNDP is looking for qualified bidders4(“the “Contractor”, or “Bidder”) able to **design, fabricate and Supply** Pre-engineered Steel Buildings (PEB), supply them to Mutare city in Zimbabwe where the UNDP operates, and provide supervision services during erection. In addition, engineering advisory services might be requested when needed.

By participating to this tender, Bidders are required to propose multiple solutions which:

1. meet Employer’s requirements in terms of robustness, durability, easy and rapid installation and dismantling procedures;
2. allow for flexibility in terms of dimensions and configurations, internal thermal conditions, and features (doors, windows, ventilation, insulation, A/C installation, etc)
3. allows for the shortest time frame to produce/manufacture the PEB from when the order is placed (based on the Employer’s requirements), and supply to the selected destination.

The Contract is structured in the following four main Stages:

Stage 1 - Design of the Product(s), its hardware and ancillaries, together with any temporary works design and preparation of detailed Construction Method Statements;

Stage 2 – Manufacture of the Product, all hardware and any other temporary works;

Stage 3 - Supply of the Product, its Structures and components to the agreed destination, Incoterms.;

Stage 4 - Supervision of the erection and installation of the Product, together with any other pre or post-erection Services as may be required.

Detailed description of deliverables for each Stage are described in section 4.

The Products will be installed in Mutare city in Zimbabwe. It is a dry season, including a short cool season during the period May to September when the whole country has very little rain. The rainy season is typically a time of heavy rainfall from November to March. The Suppliers shall take this into consideration when placing their bid.

* 1. **CONTRACT**
		1. **General Note:**

The following table includes the list of administrative and technical requirements that shall be considered by the Supplier when preparing his proposal for the provision of the Product(s)s requested by the Agreement as part of this bid.

Products proposed shall meet or exceed the minimum technical specifications listed in the relevant sections. The products shall conform in strength, quality and workmanship to the accepted standards of the relevant industry.

* + 1. **Administrative Conditions Governing the Agreement**

|  |  |  |
| --- | --- | --- |
| **Ref** | **Element** | **Value** |
|  | Expected Duration of agreement  | 3 months for design, manufacture, and supply. Duration for supervision of erection to be agreed with Employer  |
|  | INCOTERMS “shipper own container” | DAP  |
|  | Required Warranty | 1 year Defects Liability Period, plusGlobal Warranty after Defects Liability Period, for each Product |
|  | Freight & All Risk Insurance | Supplier’s responsibility, as the case might be |
|  | Requirement to Provide Samples of Goods | Not required, but inspections in Supplier’s manufacture plants may be undertaken by the Employer before signing this Agreement, or during fabrication as per contract.  |
|  | Price revisions  | Not applicable during the validity period of the Contract. Prices might be revised before any extension to the Contract is placed and agreed. |

* 1. **CONSTRAINTS**

The Supplier is required to note the following constraints to the project:

1. In the event that the Supplier requires the services of subcontractors to perform any obligations under the Agreement, the Supplier shall obtain the prior written approval of the Employer in accordance with the requirements stated in the Contract.
2. The Supplier will be responsible for their own security and safety if and when visiting the site, unless otherwise communicated by the Employer case by case.
3. The Supplier will liaise with the Employer at any stage of the project and will keep the Employer constantly informed on progress.
4. The most up-to-date Incoterms conditions apply to delivery terms, unless otherwise noted.
5. The Supplier shall be ready to respond to UNDP’s placed orders in the shortest possible time, expediting delivery.
6. The Supplier shall be ready to timely provide all administrative guarantees and insurances as required by the congtract.
7. Prices agreed and included in the Agreement are fixed and not negotiable during the validity of the Agreement. Prices might be renegotiated between the Supplier and the Employer only before any extension to the Agreement is placed.
8. Supplier is responsible for full coordination with MEP, Civil and Arch.
9. Supplier is responsible to respect the storage system (racks) dimensions and storage size

# **SCOPE OF WORK**

**2.1. THE PRODUCTS**

As described in the previous sections, the Scope of Works under this RFP is for the design and fabrication of Pre-engineered Steel Buildings (PEB), supply them to Mutare in Zimbabwe where UNDP operates, and provide supervision services during erection. In addition, engineering advisory services might be requested when needed during the course of the projects, per or post erection.

With the term PEBs, the Employer refers to the “Pre-engineered steel framed buildings” type of Product

Together with the above, the Employer requires the inclusion of a list of accessories which could be ordered in addition to the Structures, such as:

1. Canopy above vehicular gates
2. Insultation materials for cladding (sandwich panels type) with different technical performances;
3. Metal deck for admin building first floor
4. Anchors with all other necessary accessories for fixation
5. Technical solutions for natural ventilation (ridge vent, roof vents, openable windows, etc) and Systems for mechanical ventilation (roof mounted fans, wall mounted fans, etc). This is optional and the employer may use this as a substitute for mechanical HVAC system should the streel structure system meets the required indoor temperature.

In addition to the above accessories, if available in the Supplier’s catalogue, the Supplier may provide technical solutions for the supply of the following Optional:

1. Modular flooring system (heavy duty)
2. Mounting structure for solar panels on the roof
3. vehicular sliding gates and personnel doors

It will be responsibility of the Supplier to recommend on the applicability and best technical solution of these accessories in respect of their specific Products.

The above mentioned Products will be ordered by the Employer, and the Supplier will be responsible to design, fabricate and delivery the Product(s) to agreed destination.

**2.2. THE SERVICES:**

Together with the Products, the Employer may require the provision of the following Services from the Supplier:

1. Provision of site supervision services during installation of the Products at project site, guiding the Main Works Contractor hired by the Employer during installation and erection procedures.
2. Provision of engineering consultancy services, when needed by the Employer, in relation to any issue connected with the design or assessment of any of the Product(s), pre or post installation. This includes any engineering assessment on site for executing feasibilities studies and recommending on the best technical solution.
3. **TECHNICAL REQUIREMENTS**
	1. **PRE-ENGINEREED STEEL FRAMED BUILDINGS**

The Structures shall conform to the following minimum requirements for a 20year maintenance free period in a corrosive air environment.

* + 1. **Materials Specifications**

All elements, parts and components of the Structures shall be of brand new manufacture by a fabricator accredited with ISO 9001, ISO 3834 and EN 729, or equivalent approved international quality guarantee qualifications.

Steels shall conform to British Standards, American or Eurocodes Specifications, or to their equivalents with Zimbabwe National Standards approved by the Employer, and shall have mechanical and structural properties suitable for the purpose for which they will be used.

The supplier shall confirm which standard the design conforms to. A sample of international standards which may be accepted by the Employer are:

* British Standard BS5950 with loadings to BS6399 Parts 1&3 and UBC97 for wind and seismic load;

Mill certificates shall be provided upon request as confirmation of the steel quality used for the fabrication of main structural elements. The Employer reserves the right to visit themselves or to appoint a consultancy or test house to visit the manufacture premises during production. The Employer maintains the right to also conduct testing on site as deemed appropriate or take random samples from any material supplied and to have them independently tested for verification of material specification conformity.

* + 1. **Dimensions**

Structures shall respect as much as possible the following dimensions and proportions:

Warehouse and admin=90.965mX36.227/30.6m. (warehouse area=2580m2 and admin=524 m2)

Hazard store=10.8mx16.15m area (175 m2)

With a minimum building clear height for the storage of goods of 5m for the Hazard store and 9.5m for the main warehouse

Customised proportions shall endeavour to remain as true as possible to the dimensions as set out above and all variations from the dimensions indicated in this document shall be clearly indicated by the Supplier as part of its RFP technical submission.

Standard steel portal clear span structures with no internal props are preferred. The Structures with width over or equal to 40m might have one single row of props along the centre line. Proposals with clear span structures (without internal props) will be positively considered.

The structure must be free standing with no external supports/stays. The structure shall be designed with bolted connections and shall limit the amount of onsite welding required.

Bracings and other structural elements shall not inhibit or interfere with the free movement of lifting equipment within the warehouses.

**3.2.3. Modularity**

It is preferable that the structure is made up of modular bays so that the overall structure can be potentially increased /reduced in length by standard increments by using additional, identical components if required at some future date. Details of extension systems should be provided as part of the Supplier’s proposals.

**3.1.4 Welding and corrosion protection**

Refer to attached design criteria and specifications in Annex 3

**3.1.5. Characteristics**

**3.1.5.1. Loading Conditions**

For each Structure, the following minimum requirements shall be considered – Refer to attached design criteria and specifications in Annex 3

|  |
| --- |
| **Standard requirements** |
| Environmental conditions | Temperatures: from 0° C to 50° C |
| Wind Speeds | 31.1 metres per second  |
| Design life | 50 years |
| Materials to store | Medicines. hazardous materials will be stored.  |
| Distance from Sea | No sea around. However average protection to marina and humidity environment shall be included. |
| Seismic requirements  | calculated by the Supplier as part of the design phase  |
| Minimum live loads on roof | superimposed load of 0.051kN/sqm for admin and hazard ~0.1kN/sqm for warehouse, plus service load of 0.1kN/sqm |

 A number of variables may influence the price of the Product, and might be requested by the Employer for specific Work Orders Only -– Refer to attached design criteria and specifications in Annex 3

|  |
| --- |
| **Variable requirements** |
| Insulation for cladding | For admin. Building roof (0.585 W/m2K) For warehouse and Hazard store (for roof: 0.264 W/m2k) &(for side cladding:0.387 W/m2k) |
| Fire rating  | 60~120 min for warehouse and admin building (refer to life safety plan). 120min for hazard store |

**3.1.5.2. Roof**

Roof slope shall be about 12.3%. Safety lines for maintenance/access to the roof in safe conditions shall always be included, in any configuration. Roof shall be waterproof, and with adequate gutters and downspouts to allow drainage. Rainfall data shall be calculated by the Consultant. Roof to include modular rail for solar panels installation.

**3.1.5.3. Sky lights**

5% of roof cladding sections will be translucent, with a light transmission value of 80%, to allow natural sunlight to enter. Such translucent panels shall be distributed throughout the structure for all buildings.

**3.1.5.4 Cladding Panels**

All buildings will be cladded with profiled metal sheeting to within 1.0m of finished floor level. Block wall infill between columns will be constructed by the Employer.

Exterior wall and roof cladding will consist of Double skin insulated cladding.

**3.1.5.5. Gravity Ventilation**

This item is optional in case supplier meets the requested indoor temperature without using HVAC system.

A ridge vent is required along the full length of the roof, complete with hooded cowls, trims fixings, bird mesh and flashings. Ridge vents are to be provided as continuous jointed units.

**3.1.5.6. Painting**

Please provide details of the available pre-painting colours for all panels and doors. The roof should be in pre-painted blue colour.

**3.1.5.7. Service loads**

The provision of electrical equipment is not included in this scope of works however the structure shall be capable of receiving a lighting system fixed on the main frames of the roof. This system will be designed by the Employer at a later stage.

The structure must be capable of supporting the loads from a lighting system appropriate to a storage warehouse and must be designed to facilitate the installation of lights, cable trays, grounding, cable ducts, power sockets and switches.

The Supplier shall take this into consideration and include any details to provide the above requirements in the technical proposals.

**3.1.5.8. Lightening protection**

All structures shall have adequate lighting protection and grounding compliant with a recognized international standard.

**3.1.5.9. Gutter and down spouts**

All structures shall be designed with gutters and downspouts, and valley gutters appropriately sized to address rainfall data in the specific project location. The Supplier shall be responsible to investigate and identify the proper rainfall data.

All gutters, down spouts shall be of the same finish as wall panels.

Eaves type gutters to be provided on both sides of the building, finished in PVC coated galvanised steel.

All brackets, downpipes and seals to be included to floor level.

**3.1.5.10. Fire Rating**

The Supplier shall confirm the compliance of the structures with an international fire rating procedure. If insulated panels are installed, the Supplier shall provide certificates, data and any other information for fire rating / fire protection.

Double skin insulated wall cladding can be detailed and supplied to provide a fire rating for external walls in excess of 1m from the boundary of up to 2 hours. This is achieved by supplying the rails slightly shorter, slotting the connections and providing neoprene washers, which permit the materials to expand, but not fail, in the event of fire.

Smoke vents to be designed and supplied

**3.1.5.11. Assembly/Disassembly**

The warehouses shall be capable of being disassembled and moved without damaging/replacing any major elements, and without the use of specialist equipment.

**3.1.5.12. Accessories**

When placing an order, the Employer will include specific accessories to the Structures, depending by the specific project requirements. The accessories identified below shall be consistent with the performance specifications outlined elsewhere in the previous sections. they shall be specified in the technical specification and priced in the financial proposal.

Vehicle Sliding Doors

Heavy duty rolling doors suitable for truck access shall have a minimum dimension of about 4m wide x 4m high. They shall be fully lockable from the inside with padlock and drop bolts. Number of doors and their locations will as per the layout drawings attached in section Annex 3 . Elevation 1 in drawing Z2016-200-ADB-002 and Elevation A in Z2016-100-ADE-006

The rolling doors shall hang from exterior mounted trolley rails connected to a structural beam

The exterior suspension rails shall be protected by a hood trim to match. The hood profile is to match the profile of the wall panels.

Pedestrian Doors

Lockable pedestrian doors 900mm wide with cylindrical locks and 3 hinges in each structure shall also be available. Number of doors and their locations will be as per the layout drawings attached in section Annex 3.. Elevation A&B in Z2016-100-ADE-006

Rolling doors and pedestrian doors have to be designed and supplied complete with frames, rail tracks, guides, handles, hinges, locks, clips, fasteners, trolley rails, etc. to the Employers approval.

The door profile is to match the profile of the wall panels.

Cladding with insulation

Canopy above vehicular gate

Logos and branding

* Client logo painted on side wall to maximum achievable size
1. **WORKS REQUIREMENTS**

The Contractor will be required get express written permission to progress with each phase of the contract. The following are the for the works:

PHASE 1 – DESIGN

PAHSE 2 – MANUFACTURE

PHASE 3 – SUPPLY

PHASE 4 – SUPERVISION DURING ERECTION and LAUNCHING

* 1. **Codes and standards**

On the signature of the Agreement by both parties and prior to any works commencing the Supplier shall furnish to the Employer copies of all standards and specifications mentioned and referred to in the bid, and any other code or standard which may be considered necessary by the Employer.

* 1. **Phase 1 - Design**

Phase 1 starts immediately when a Work Order is signed by both parties.

The design shall be developed in two stages: “Preliminary Design”, for review and endorsement by the Employer, and a subsequent “Detailed Design” , for construction/erection operations, as outlined below. The Detailed Design can be developed during manufacture phase.

All documents shall be in English language.

* + 1. **Preliminary Design**

Within 14 calendar days after the contract signature, the Supplier shall provide Preliminary Design to the Employer, and this set shall include:

1. plans, sections, elevations of the Structures. These documents shall clearly show and demonstrate the Supplier included all Employer’s requirements in the design (such as type of warehouse, dimensions, accessories, etc).
2. programme for the fabrication works including details of proposed testing regime to enable the Employer or their consultant to schedule visits to the manufacturer’s works.
3. Method statement for the erection of the Structures, inclusive of the minimum resource i.e. labour, plant and equipment the Main Works Contractor is required to provide for erecting the Structures, electrical power required (if), clear working space required, etc.
4. Any Temporary Works designs and site conditions assumptions which are deemed necessary for the design of any other permanent works under the responsibility of the Employer (Site works, foundations design, etc)
5. Structural calculation report of the Structures, clearly demonstrating how the Supplier will comply with the Employer’s required level of design safety and reliability. They shall also include base reactions / supports reactions and any other useful elements the Employer need to design the remaining part of the civil structures (foundations, etc)
6. An installation inspection and test plan, identifying all tests and inspections the Contractor is required to carry out during the installation process and at completion.
7. A manufacture inspection and test plan, identifying all tests and inspections that will be carried out during the manufacture of the Structure(s).

The drawings shall clearly identify what is under the responsibility of the Supplier to provide, and what falls under Main Works Contractor’s responsibility to provide.

The documents shall be submitted in “Hard Copy” paper format (two number copies ISO A1 and A4 for reports) and “soft copy” electronic format (on CD-ROM with a lifetime warranty). The acceptable soft copy format shall be Adobe PDF (electronic paper copy) formats and any other format approved by the Employer.

Copies of all drawings, documents, reports and schedules and manuals shall also be submitted to the Employer in the standard operable format of the element in question (AutoCAD.dwg, Microsoft Word, Microsoft Excel etc) written to a CD-ROM with a lifetime warranty.

This package shall be submitted to the Employer for review. A web-based sharing system (cloud storage systems) may be used and details on how to use it will be provided by the Employer.

After review, if required the Employer will return comments on the submitted design with indication of missing details/elements to be changed and with request for amendments or clarifications. Comments will be forwarded to the Contractor within 2 weeks’ time after the submission.

The Contractor shall incorporate the comments in the design, and re-shared with the Employer for final clearance.

Designs and Check Certificates shall be certified by a Registered Professional Engineer, or equivalent, engaged by the Supplier and approved by the Employer.

During the design phase the Supplier is required to maintain a constant engagement with the Employer, keeping him informed on the process and on the progress of the works. The Employer will regularly organise conference calls or meetings in which the Supplier is required to attend. Schedule of meetings will be defined at a later stage (typically they are weekly), and in any case the Employer will inform in advance to the Supplier.

* 1. **Phase 2 – Manufacture**

Following the satisfactory completion of the design and provided there are no other comments from the Employer, the Supplier shall, on receipt of such an instruction from the Employer proceed with the manufacturing.

At the receipt of the instruction, the Supplier shall also prepare a ‘Construction Set’ of Design Documents as explained below.

At the completion of the manufacturing, the Supplier shall submit to the Employer certification that the Structures have been manufactured in accordance with the standards and designs approved in previous stages.

The Supplier shall complete the manufacture before the deadlines identified in the contract document.

* + 1. **Construction Set of Documents**

Within 14 calendar days after the notice to proceed with the manufacture, the Supplier shall prepare a ‘Construction Set’ of Design Documents which shall be based on the ‘Review Set’ of documents already approved in the design phase.

The Construction set of Documents shall include, at minimum:

1. Plan, elevation, and section views of the Structures, dimensions of all components, shop welding and connection details, and general and specific notes regarding design and construction.
2. Detailed structural calculation report, which shall include all information required by the Employer to design the remaining elements of the Product;
3. A detailed Health and Safety plan for the erection sequences/ phase (The Main Works Contractor will be required to adhere to);
4. Erection drawings, specifications, and instructions/method statements for assembly the Structures, together with bolt schedules and all the other necessary structural information for the erection phase; Method statement shall also include Quality Control Procedures to be implemented onsite by the Supplier’s team to ensure the Structures are assembled correctly.
5. Erection plan (with sequences), including installation requirements; Include plans and instructions for proper erection of structure with expected picking load designated “pick points” for proper erection equipment selection. Include the picking weights of the components;
6. Drawings, specifications, and instructions/method statements for the launching phase
7. Erection programme, estimated manpower and time required to complete erection and launching of the warehouse
8. An “Operational and Maintenance Plan” for operating and maintaining the Product. The Plan shall also provide details of the deconstruction methodology to be employed.
9. Complete Schedule of Materials and parts lists, identifying the quantity and type of all materials included in the Structures (And in the containers), with the relative codes as identified in the drawings;
10. Total weight of the structure, and the packed volume, i.e. the number of standard 20ft or 40ft shipping containers (as appropriate) required to transport the materials and the weight of each container. Details on proposed shipment, times, etc shall be included;
11. Detailed instructions on how to store and protect the materials on site shall be included.
12. An installation inspection and test plan, identifying all tests and inspections the Contractor is required to carry out during the installation process and at completion.
13. A manufacture inspection and test plan, identifying all tests and inspections that will be carried out during the manufacture of the warehouse structure.
14. A comprehensive monitoring program, which alerts the contractor/designer/owner of potential problems, should be implemented to ensure that allowable stresses are not exceeded. The designer should develop a design model showing the expected stresses and the anticipated load distribution during the launch. These values for allowable stresses/forces covering all anticipated modes should be developed in advance.

Construction sets of documents shall be submitted in “Hard Copy” paper format (two number copies ISO A1 or A4 for reports) and “soft copy” electronic format (on CD-ROM with a lifetime warranty). The acceptable soft copy format shall be Adobe PDF (electronic paper copy) formats and any other format approved by the Employer.

Copies of all drawings, documents, reports and schedules and manuals shall also be submitted to the Employer in the standard operable format of the element in question (AutoCAD.dwg, Microsoft Word, Microsoft Excel etc) written to a CD-ROM with a lifetime warranty.

All elements forming part of Structures that will be delivered to the sites shall be clearly labelled and easy recognizable within the instruction manual, packing lists, parts lists and the drawings.

It is Employer’s intention to have all erection works undertaken by the Main Works Contractor at project site.

The Supplier shall be responsible that all necessary information for the erection are contained in the “Construction set” of drawings and shall be deemed to be responsible for any delays or costs arising from errors or omissions in these documents.

During this phase the Supplier is required to maintain a constant engagement with the Employer, keeping him informed on the process and on the progress of the works. The Employer will regularly organise conference calls or meetings in which the Supplier is required to attend. Schedule of meetings will be defined at a later stage (typically they are weekly), and in any case the Employer will inform in advance to the Supplier.

During phase 2 and 3, the Supplier shall remain fully available to support the Employer and his technical bodies in the design process and planning phase of the other elements of the infrastructure (civil works, design of foundations, design of abutments, etc), especially when these elements interfere with the works in object of this agreement.

Technical advice or supporting information may be requested from the Main Works Contractor or the Employer. The Supplier shall include the eventuality to attend to meetings and conference calls and to support the Main Works Contractor and the Employer in resolving any issue that may arise (also preparing additional documentation).

The Supplier shall consider these additional supports included in the prices proposed.

During this phase, when the “Construction set” of documents is accepted, the Employer reserves the right at any stage to share with the Main Works Contractor any or all the document forming part of the Construction set of documents, such as designs, calculations, plans, etc, in order to start the construction of civil works associated.

* 1. **Phase 3 - Supply**

The Supplier will be required to ship the Product in "shipper own containers" INCOTERM to avoid unnecessary demurrage/port charges costs.

For the Purchase Order, the destination will be Mutare city in Zimbabwe. The consignee, together with any other notify parties, shall be confirmed by the Employer to the Supplier before shipments.

The Supplier shall forward to the Employer all Bill of Ladings, Insurances certificates and Commercial Invoices for all shipments immediately when available. Schedule of delivery with dates, name of boats, details, etc. shall be prepared by the Contractor for trucking reasons.

Each container must have a full inventory of the parts/elements/components which are contained (packing list). This list should correspond to an overall parts list and drawings for each structure. All the materials shall be labelled and identified with a code, and correspondence shall be found with the drawings and parts list. Containers shall be sealed and each seal number shall be communicated to the Employer together with the Container Number, before shipment. The Supplier must specify the total weight of the structures, and the packed volume, i.e. the number of standard 40ft shipping containers (or 20ft containers, as appropriate) and the weight of each container.

A proper and logical sequence of loading the containers must be followed before shipping. The first containers shall contain first elements and components to be used in the erection phases. The other ones shall include the rest of the materials, in the right order of use.

The Supplier shall provide and include in the containers one or more tool-kit(s) with the most useful and common tools required to fix, install, erect, cut, etc, all the elements and parts of the Structures. These may include, but not be limited to, ropes, pliers, mole grips, crowbars, screwdrivers, heavy duty sledgehammer, adjustable spanners, masonry drills and bits, steel measuring tape, markers, etc.

Together with this, all the components for the launching phase shall be included.

Upon arrival at project site , the containers will not be opened and de-stuffed until the erection works start, or when the Employer confirms in writing the necessity for the containers to be opened.

When approaching at the erection phase, the Employer will inform the Supplier on the intention to open the containers. The Supplier may be required to provide an officer who shall be present at the opening of the containers. A visual inspection will be undertaken. The Employer will not undertake a physical inventory of their contents, nor will the Employer accept responsibility for confirming the contents are in accordance with the inventory/parts list.

A proper opening procedure will be agreed between the Employer and the Supplier.

* + 1. **Requirements for delivery, freight and insurance**

The elements and components of the warehouse should not be fragile or easily damaged during transport.

Fragile materials must be well packaged with appropriate protection against accidental damage and against weather during transit.

Insurance of the freight will fall under the responsibility of the Supplier.

The Employer reserves the right to purchase either Ex-Works, FCA (Departing Port), DAP (Delivered at Place), whichever is in its best financial interest of the Employer.

In transit, the dismantled elements and components of the warehouse should fit on standard ISO 20 or 40foot shipping containers. The Supplier shall provide a detailed packing list and offloading instructions for the Contractor.

DAP option would normally be preferred, unless otherwise stated in the Purchase Order. The Supplier shall be required to keep the Employer constantly informed on the estimated date and time of arrival of the materials at the Destination Port. Estimated delivery date shall be confirmed to the Employer at least 21 days in advance.

The Destination Port will be specified in the respective Purchase Order. Notwithstanding the definition of "DAP”, the Employer will have 40 (forty) working days after each delivery to report any losses or alleged damage. This report is to be made by email to the Supplier and to include photographs of any damage. Any items so reported are to be made available for inspection by the Supplier within 20 (twenty) days of the report being sent.

The Proposer is required to quote for the delivery of the structures to the proposed warehouse site on DAP Terms.

 The Supplier shall deliver the goods to the agreed destinations no later than the delivery times specified in this document and agreed with the Supplier. Any delay in clearing customs shall be added to these delivery times.

* 1. **Timing and deadlines**

The Employer requires the Supplier to adhere to the following schedule, which shall be applied to each Product ordered under a specific Purchase Order signed:

|  |  |  |  |
| --- | --- | --- | --- |
| Phase | Description of submittals | Max delivery time | Notes |
| 0 | Signature of the PO | Initial date | with provision of standards and codes used |
| 1 | Design - Review Set of Documents | 14 calendar days | From the signature of the PO |
| 2.1 | Construction set of Documents | 14 calendar days | From the notice to proceed with manufacture |
| 2.2 | Manufacture of the Product | From 30 to 45 calendar days maximum | From notice to proceed with manufacture.  |
| 3 | Supply | 15 to 30 calendar days  | As soon as practicable with no delays |

* 1. **Delay damages**

Delay damages will be charged as per UNDP general terms and conditions attached.

* 1. **4 – Supervision during erection and launching**

The nature of the project is such that the cooperation between all parties is key to the timely and cost-efficient delivery of the project. To this end the Supplier is required to engage with the Employer in a meaningful way to ensure the smooth delivery of the project.

The Supplier shall co-operate with the Main Works Contractor on the project sites to ensure that the erection works are carried out in as efficient manner as possible. The erection, installation and launching of the warehouse shall be undertaken by the Main Works Contractor and its erection team under the supervision of the Supplier’s team. The Employer’s Representative on site will be the Employer’s designated person to manage and supervise the works, the coordination and a proper flow of communications.

The Supplier shall comply with all requests of the Employer in relation to the implementation of security measures on site, for the erection and launching phases of the warehouse. This shall involve liaising with the Employer prior to the commencement of Works on site and establishing agreed safety and security procedures and facilities to be implemented throughout the erection phase of the structures. The level of safety and security measures shall be such to ensure, as far as is reasonably practicable the safety of the Employers, Main Works Contractor and Suppliers staff on site and shall be cognizant of the security situation in the specific countries.

Price for supervision services during erection may be included in a separate Purchase Order, prepared and released by the Employer before the services are required.

* + 1. **Assembly requirements**

Following the satisfactory completion of Phase 3 and provided there are no other comments from the Employer, the Supplier shall, on receipt of such an instruction from the Employer proceed with the Supervision Phase.

The Employer will formally notify the Supplier of the intention to start the erection works in the project site at least 4 weeks in advance. This is to give enough time to the Supplier to mobilize the required technical experts to oversee the works on site.

The Supplier shall provide adequate and competent supervisor(s) during erection works. The Supplier’s technical expert shall inspect works carried out by the Main Works Contractor on site to confirm and make sure these are carried out in accordance with the requirements of the supplier’s documentation. Inspections shall be carried out in accordance with the submitted inspection and test plan. The Suppliers technical expert shall remain on site for the entire duration of the erection phase.

The Employer may provide adequate office facilities on site to allow the Supplier carrying out his tasks/desktop reviews. If not available, the Supplier shall provide his own facilities/equipment of which he will be notified should this be the case.

The Supplier shall be fully responsible for the following activities:

* General supervision to ensure all relevant assembly and erection works are implemented in accordance with the approved design and supplier’s method statements;
* Provide reports on progress and project issues to the Employer;
* The Supplier shall check all materials to be used on the project prior to their incorporation in the Structures. if some elements, tools, components or parts of the Product are missing and were not included in the supply (within the containers) or some of them are defective, the Supplier must inform immediately the Employer.
* The replacement of defective elements or the supply of missing elements, shall be under Supplier’s responsibility and it shall be carried out at its own expenses (including manufacturing costs and transport/supply costs to the construction site). A detailed report detailing the event, the cause which damaged the element and the proposed course of action to replace or repair the element shall be prepared by the Contractor’s Technicians and submitted to the Employer within 2 days from when the issue arises.
* If during construction works it appears that an element or elements of the Product requires replacement due to errors in design or fabrication, the replacement of incorrect elements shall be done by the Supplier, and costs shall be borne by the Supplier.
* The Supplier shall oversee the Main Works Contractor throughout the erection and launching of the warehouse and shall address any issues that may arise during assembly works. If any issue is noted, the Supplier shall report directly and exclusively to the Employer’s referent appointed by the Employer, who shall instruct the Main Works Contractor accordingly. The Supplier shall neither seek nor accept instructions from any authority external to the Employer, or their authorized representatives in connection with the performance of its services under this Contract.
* The support to the Main Works Contractor and to the Employer in reading the assembly manual/instructions shall be provided with a constant and daily presence in the construction site.
* To execute any test required during erection and completion.
* To execute a pre-launch and post-launch survey of the structure should be performed.

In cases that the works cannot proceed due to the delays arising from the Supplier, the Supplier shall be liable to repay these costs to the Employer.

* + 1. **Assembly Time**

It should be possible for a single technically competent Main Works Contractor, without prior specific product training, and with a sufficient number of un-skilled labourers, to assemble, install and launching easily the warehouse superstructures within a short period of time. The Supplier shall include in their Method Statement an assembly timeline and minimum labour and plant requirements.

* + 1. **Progress Reports**

The Supplier shall prepare and submit periodic progress reports as required by the Employer but on a frequency of not less than once per week in advance of scheduled progress meetings. The content of said progress reports, not limited to the required headings and necessary attachments shall be agreed in writing with the Employer prior to erection commencing.

In addition, the Supplier shall prepare and maintain a daily photographic record of on-site activities and progress. All photographs shall be taken in digital format using a digital camera with a minimum of 3-million-pixel resolution shot at the highest resolution and saved as a jpeg format with a minimum size of 1024 x 768 pixels. The photographs shall be appropriately tagged identifying the date, location and objective.

Additional progress photographs may be requested by the Employer. The cost involved in taking such additional photographs and presenting same to the Employer shall be borne by the Supplier.

The Supplier shall not publish any photographs of the Works, without the prior approval in writing from the Employer, or allow the Works to be used in any form of advertising whatsoever.

* + 1. **Site Progress Meetings**

The Supplier will be expected to participate at weekly site progress meetings during the course of the Works. The site meetings will be coordinated by the Employer’s referent who will manage agendas and prepare records of discussions and decisions for circulation. The Contractor shall ensure that the site staff with responsibility for the planning and delivery of the Works are present at these site meetings.

Site meetings shall consider, but not be restricted to, the following elements:

1. Health and Safety including a record of accidents/incidents;
2. Project progress based on the project programme (timeline);
3. Construction issues relating to quality, work methods etc;
4. Any issues relating to procurement of labour and materials;
5. Any proposed variations to the works;
6. Applications for payment; and
7. Any other business.
	* 1. **Design Errors**

If errors, omissions, ambiguities, inconsistencies, inadequacies, or other defects are found in the Supplier’s Documents, they and the Works shall be corrected at the Supplier’s cost, notwithstanding any consent or approval under this clause.

* + 1. **Environmental Impact**

The product should have the minimum carbon footprint over the entire product lifespan (manufacture, delivery, use and disposal).

* + 1. **Tests during erection and completion**

The Supplier shall bear the costs of all testing to be carried out as part of the Contract with the exception of those during erection supervision.

Tests shall prove and demonstrate, over all, the Product is able to achieve design resistance and strength. The testing requirements during erection phases shall be clearly indicated by the Supplier as part of the design submittals and shall be undertaken by the Main Works Contractor, under the supervision of the Supplier and the Employer’s Representative, and shall be certified by the Supplier as having been completed in accordance with his method statement and specification.

As per the schedule of tests provided by the Supplier, the Supplier shall agree with the Employer the time and place for the specified testing of the warehouse.

The Employer may vary the location or details of specified tests, or instruct the Supplier to carry out additional tests. If these additional tests show that the tested warehouse is not in accordance with the Contract, the cost of carrying out these tests shall be borne by the Supplier, notwithstanding other provisions of the Contract.

Only when the warehouse is installed on final position and ready for the use, the Supplier shall give notice in this regards and Tests on Completion may start.

The tests shall be executed only when the operations do not interfere with the other construction activities of the Main Works Contractor.

The Supplier shall give notice to the Employer not less than 21 days prior to the date after which the Supplier will be ready to carry out such tests. Tests on completion shall be carried out within 14 days after this date. Such Tests shall be executed in the presence of the Employer, the Main Works Contractor and the Supplier.

Results of Tests shall be compiled and shared with the Employer. As soon as the warehouse, or a section, have passed each of the Tests on Completion described, the Supplier shall submit a certified report of the results of these Tests to the Employer’s Representative.

* + 1. **Retesting of the works**

If any element(s) fail to pass the Tests on Completion, the Employer or the Supplier may require the failed Tests, and Tests on Completion on any related work, to be repeated under the same terms and conditions.

If the parts or sections fail to pass the Tests on Completion and further repetitions of the same Tests, the Employer may reject the Product, materials, design or workmanship by giving notice to the Supplier, with reasons.

The Supplier and the Employer will investigate reason for failure. If the reason is found to be a defect in the design or in the manufacture, the Supplier shall then promptly make good the defect at the Supplier’s cost and ensure that the rejected item complies with the Contract. The Employer may require the failed test to be repeated under the same terms and conditions. If the rejection and retesting cause the Employer to incur additional costs, the Supplier shall pay these costs to the Employer.

If the reason will be found in an erection executed not in compliance with Supplier’s design/method statement, The Supplier and the Main Works Contractor will be considered equally responsible to remedy the defects at their own costs.

* + 1. **Failure to pass tests on completion**

If the Product, or a section, fail to pass the Tests on Completion repeated under previous clause, the Employer shall be entitled to:

1. Order to repeat the Tests;
2. If the failure deprives the Employer of substantially the whole benefit of the Product or Section, reject the Product or Section (As the case may be), terminate the Contract/Purchase Order as a whole, or in respect of such major part which cannot be put in the intended use. Without prejudice to any other rights, under the Contract or otherwise, the Employer shall then be entitled to recover all sums paid for the product or such part (As the case may be), plus financing costs and the cost of dismantling the same, clearing the site and returning the Product to the Supplier.
3. Issue a Commissioning Certificate, if the Employer wants so.

In the event of sub-paragraph c), the Supplier shall then proceed in accordance with all other obligations under the Contract, and the Value of the Purchase Order shall be reduced by such amount as shall be appropriate to cover the reduced value to the Employer as a result of this failure. The Employer may require the reduction to be i) agreed by both Parties (in full satisfaction of this failure only) and paid before the Commissioning Certificate is issued, or ii) determined with the support of the Employer’s Representative stating: 1. the amount which the Employer is Entitled to be paid by the Supplier, and/or 2. the extension (if any) of the Defects Liability Period.

* + 1. **Commissioning Certificate**

The works under the specific Purchase Order(s) shall be deemed to the Employer to be completed when:

1. The works have been completed by the Main Works Contractor, as confirmed and certified by the Supplier, fully in compliance with the requirements of this Contract;
2. All the Tests on Completion have been successfully executed (with positive results) and have been certified by the Supplier;
3. A Commissioning Certificate has been issued;

The Supplier may apply by notice to the Employer for a Commissioning Certificate as soon as the Works are completed and ready to be handed over to the Employer.

The Employer shall, within 28 days after receiving the Supplier’s application:

1. Issue the Commissioning Certificate to the Supplier, stating the date on which the works were completed in accordance with the Contract, except for any minor outstanding work and defects which will not substantially affect the use of the bridge structures for their intended purpose (listing such outstanding works and defects which are to be remedied); or
2. Reject the application, giving reasons and specifying the work required to be done by the Supplier to enable the Commissioning Certificate to be issued.

With the Commissioning Certificate the Supplier acknowledges that the Structures have been erected and completed in accordance with the Contract and his method statements, and that the whole Product is ready, safe, calibrated and correctly installed and it can be taken over and used by the Employer. Defects Liability Period starts from the date stated in such Certificate.

After the Commissioning Certificate and during the Defects Liability Period, the Supplier shall be called to respond if any defects or damages will occur at the Product. Supplier and Main Works Contractor will be considered respectively responsible to repair such outstanding works or damages depending by the cause of the defects or the damages, and as clarified in previous sections.

The Supplier shall not be considered liable under this clause if such damages or defects arise due to Employer’s improper use of the Product.

* 1. **After-Sales Technical Support**

In the event of a problem with the product during assembly/use, technical support must be available from the Supplier for the duration of the contract. This may be in the form of a phone contact, or other similar and listed in the assembly manual.

Spare parts and repair kits for any foreseeable damage must be available from the supplier for the duration of the contract. A list of spare parts and their costs as separate line items is to be included in the financial proposal.

The Supplier shall provide details of all spare parts that may possibly be required for the units and confirm these parts will be available to purchase from the supplier for at least 4 years from the date of contract agreement.

* 1. **Warranty:**

The supplier must provide a warranty covering the product against defects for a period of at least 1 year on all warehouse panels and parts.

The supplier shall include a copy of the supplier’s warranty, detailing warranty periods, specifying inclusions and exclusions from the warranties.

Provide any information regarding certifications or quality accreditations which have been awarded for the design, materials, manufacturing process or the end product itself.

**5.0 CONSULTANT’S STAFF REQUIREMENTS**

Below are the minimum qualifications required of the staff of the proposed Consultant

|  |  |
| --- | --- |
| **Team Leader /Project Manager** | - General Experience At least experience of 5 years in field of management for projects |
|  | - Qualifications BSc in engineering A project management qualification is desirableRegional/ international experienceGood command in English |
| **Senior in house engineer for design** | - General ExperienceOver 5 years’ experience in design of steel structures -Regional/ international experienceGood command in English- Specific Experience relevant to the assignment |
| **Site supervision for erection** | - General ExperienceAt least 10 years experience in steel erection supervision (for technical) and 5 yease (for engineer)-Regional/ international experienceGood command in English |